

John Odenkirk, Virginia Department of Game & Inland Fisheries
1320 Belman Road, Fredericksburg, VA 22401
(540) 899-4169 x117, John.Odenkirk@dgif.virginia.gov
Presented at American Fisheries Society, Virginia Chapter Annual Meeting, Winchester
March, 2006

Northern Snakeheads in the Tidal Potomac River System

Abstract – A northern snakehead *Channa argus* population was documented within a 23-km reach of the tidal freshwater Potomac River and associated tributaries in 2004 when 20 snakeheads were collected with several gears including hook-and-line and electrofishing. An additional 271 snakeheads were collected in 2005 primarily with various electrofishing gears. Boat electrofishing mean catch rate increased from 0.2 fish/hr in 2004 to 2.8 fish/hr in 2005. Mean total length was 282 mm (SD=124), and mean weight was 521 g (SD=619). Minimum and Maximum total lengths were 88 and 655 mm, while weight extremes were 7 and 3145 g. Dominant habitat uses were shallow waters with floating and/or emergent vegetation. Natural reproduction was the likely explanation for the collection of age-0 fish both years and identification of nine year-classes in 2005. Trends in female GSI and otolith daily ring counts of age 0 fish suggested protracted and/or repeat spawning beginning in early May and extending through July. The collection pattern suggested snakeheads originated from Dogue Creek, as over 93% came from this watershed. Snakeheads appeared to display a fall migration from tidal waters to headwater tributaries following a major rain event. Eight forage species were identified, but banded killifish comprised 66% of identifiable food items. Bluegill, pumpkinseed and white perch were also commonly consumed.